**Constructing Regular Polygons**

Equipment Needed: ruler, protractor, compass

Method One

Drawing a 5cm side length octagon.

1. Draw a 5cm straight line in the middle of your page.

2. Use a protractor measure the internal angle of the octagon(refer to your polygons table). It should be 135°, at the end of the line.

5cm

135°

5cm

3. Mark 5 cm on each of these new lines.

4. Continue to “add on” 135° around the figure until the shape is complete.

Method Two

Drawing an octagon to be drawn inside a circle of radius 5cm

1. Draw a circle lightly with a grey lead with a radius of 5cm. (ie. the biggest width of the circle will be 10cm) using your compass.
2. In the centre of the circle lay your protractor down and mark of 45°. (360° ÷ 8 = 45°). NOTE: This angle is in your Polygon table under internal angle.
3. There should be 8 marks on your circle.
4. Using a ruler draw a line from each mark.
5. Gently rub out the circle.

1. Practise by creating a heptagon and a hexagon by using both methods
2. Challenge create a dodecagon.